Complete Summary

GUIDELINE TITLE

Screening for obesity in adults: recommendations and rationale.

BIBLIOGRAPHIC SOURCE(S)

Screening for obesity in adults: recommendations and rationale. Ann Intern Med 2003 Dec 2;139(11):930-2. [5 references] PubMed

COMPLETE SUMMARY CONTENT

SCOPE

DISEASE/CONDITION(S)

Obesity and overweight

GUIDELINE CATEGORY

Counseling
Prevention
Screening

CLINICAL SPECIALTY

Family Practice
Internal Medicine
Preventive Medicine

INTENDED USERS

Advanced Practice Nurses
Allied Health Personnel
Dietitians

Nurses
Physician Assistants
Physicians
Psychologists/Non-physician Behavioral Health Clinicians

GUIDELINE OBJECTIVE(S)

- To summarize the U.S. Preventive Services Task Force (USPSTF) recommendations on screening for obesity in adults based on the USPSTF's examination of evidence specific to obesity and overweight in adults
- To update the 1996 recommendations contained in the Guide to Clinical Preventive Services, Second Edition

TARGET POPULATION

Adults seen in primary care settings

INTERVENTIONS AND PRACTICES CONSIDERED

1. Screening for overweight and obesity
    - Body mass index (BMI) measurement
    - Waist circumference measurement
    - Note: Techniques such as bioelectrical impedance, dual-energy X-ray absorptiometry and total body water measurement were considered.
2. Combined counseling and behavioral interventions including:
    - High-intensity counseling (more than 1 person-to-person (individual or group) session per month for at least the first 3 months of the intervention) on diet and exercise
        - Note: Moderate- and low-intensity counseling were considered.
    - Nutritional education
    - Behavioral strategies including the 5-A framework (Assess, Advise, Agree, Assist and Arrange)

Note: Treatment interventions such as medications (orlistat and sibutramine) and surgery (gastric bypass, vertical banded gastroplasty, and adjustable gastric banding) were considered.

MAJOR OUTCOMES CONSIDERED

Key Question No. 1: Is there direct evidence that screening for obesity improves health outcomes?

Key Question No. 2: What is the prevalence of overweight and obesity?

Key Question No. 3: Is there a reliable and valid screening test?

Key Question No. 4: Do any of the interventions below lead to sustained weight reduction or improved glucose tolerance, lipid status, or blood pressure?

- Counseling and behavioral treatments
- Medications
- Surgery

Key Question No. 5: Do any of these interventions lead to improved health outcomes?

Key Question No. 6: What are the harms of screening and treatment?

METHODOLOGY

METHODS USED TO COLLECT/SELECT EVIDENCE

Hand-searches of Published Literature (Primary Sources)
Hand-searches of Published Literature (Secondary Sources)
Searches of Electronic Databases

DESCRIPTION OF METHODS USED TO COLLECT/SELECT THE EVIDENCE

Note from the National Guideline Clearinghouse (NGC): A systematic evidence review was prepared by the Research Triangle Institute (RTI) International - University of North Carolina at Chapel Hill (RTI-UNC) Evidence-based Practice Center (EPC) for the Agency for Healthcare Research and Quality (AHRQ) for use by the U.S. Preventive Services Task Force (USPSTF) (see the "Companion Documents" field).

Search Strategy

EPC staff developed an analytic framework of obesity screening components, with key questions, and eligibility criteria. They examined the USPSTF's 1996 review, then searched MEDLINE and the Cochrane Library for articles published in English between January 1994 and February 2003. In addition EPC staff evaluated well-done systematic reviews from the National Institutes of Health (NIH), the Canadian Task Force on Preventive Health Care (CTFPHC), the University of York for the U.K. National Health Service (NHS), the National Task Force on the Prevention and Treatment of Obesity, and the British Medical Journal's Clinical Evidence. They used the last as the sole systematic review source for drug efficacy as the comprehensive reviews were outdated.

To compare treatment efficacy across reviews, EPC staff extracted data from each review's evidence tables on studies with current interventions and at least 1-year follow-up. They also drew from their general conclusions. They then reviewed primary literature not covered by prior reviews.

Randomized controlled trials (RCTs) or systematic reviews of RCTs were preferred evidence: when lacking, EPC staff evaluated cohort and nonrandomized controlled studies. Because of limited long-term data, they accepted pharmacotherapy efficacy trials with 6 months minimum follow-up; otherwise, they required at least 12 months. Study quality was rated using USPSTF criteria. Articles were excluded that did not meet USPSTF criteria for at least "fair" quality.

Inclusion and Exclusion Criteria

EPC staff developed inclusion and exclusion criteria for selecting the evidence relevant to answer the key questions, except key question no. 3. Because all

relevant studies measured weight directly or by body mass index (BMI), EPC staff did not conduct searches for key question no. 3. At least 2 authors independently reviewed abstracts and articles, excluding those not meeting eligibility criteria.

NUMBER OF SOURCE DOCUMENTS

Key Question No. 1: Efficacy of screening = 0

Key Question No. 2: Epidemiology of obesity

- Prevalence = 1
- Health Risks = 14

Key Questions No. 4- 5: Efficacy of treatment for weight reduction or intermediate outcomes

- Counseling and behavioral treatment = 21
- Medications = 10
- Surgery = 2

Key Question No. 6: Harms of screening and treatment

- Counseling and behavioral treatment = 21
- Medications = 15
- Surgery = 2

METHODS USED TO ASSESS THE QUALITY AND STRENGTH OF THE EVIDENCE

Weighting According to a Rating Scheme (Scheme Given)

RATING SCHEME FOR THE STRENGTH OF THE EVIDENCE

The U.S. Preventive Services Task Force grades the quality of the overall evidence for a service on a 3-point scale (good, fair, poor):

Good

Evidence includes consistent results from well-designed, well-conducted studies in representative populations that directly assess effects on health outcomes.

Fair

Evidence is sufficient to determine effects on health outcomes, but the strength of the evidence is limited by the number, quality, or consistency of the individual studies, generalizability to routine practice, or indirect nature of the evidence on health outcomes.

Poor

Evidence is insufficient to assess the effects on health outcomes because of limited number or power of studies, important flaws in their design or conduct, gaps in the chain of evidence, or lack of information on important health outcomes.

METHODS USED TO ANALYZE THE EVIDENCE

Systematic Review with Evidence Tables

DESCRIPTION OF THE METHODS USED TO ANALYZE THE EVIDENCE

Note from the National Guideline Clearinghouse (NGC): A systematic evidence review was prepared by the Research Triangle Institute (RTI) International - University of North Carolina at Chapel Hill (RTI-UNC) Evidence-based Practice Center (EPC) for the Agency for Healthcare Research and Quality (AHRQ) for use by the U.S. Preventive Services Task Force (USPSTF) (see the "Companion Documents" field).

Data Extraction and Synthesis

For studies that met inclusion criteria, a primary reviewer abstracted relevant information using standardized abstraction forms. EPC staff graded the quality of all included articles according to USPSTF criteria. They abstracted or calculated 95% confidence intervals (CIs) for treatment efficacy from available data whenever possible. When sample size was not reported with variance, baseline sample was used.

Preparation of the Systematic Evidence Review

The EPC authors worked with 3 members of the USPSTF throughout the review and, during 2001 and early 2002, presented a work plan and interim reports to the full USPSTF. After Task Force feedback and any necessary revisions, the EPC distributed a draft of this systematic review for broad-based external peer review, including experts in the field and relevant professional organizations and federal agencies. Following peer review, EPC staff revised the evidence report and presented it to the Task Force for it to use in making final recommendations on this topic.

METHODS USED TO FORMULATE THE RECOMMENDATIONS

Balance Sheets
Expert Consensus

DESCRIPTION OF METHODS USED TO FORMULATE THE RECOMMENDATIONS

When the overall quality of the evidence is judged to be good or fair, the U.S. Preventive Services Task Force (USPSTF) proceeds to consider the magnitude of net benefit to be expected from implementation of the preventive service. Determining net benefit requires assessing both the magnitude of benefits and the magnitude of harms and weighing the two.

The USPSTF classifies benefits, harms, and net benefits on a 4-point scale: "substantial," "moderate," "small," and "zero/negative."

"Outcomes tables" (similar to 'balance sheets') are the USPSTF's standard resource for estimating the magnitude of benefit. These tables, prepared by the topic teams for use at USPSTF meetings, compare the condition specific outcomes expected for a hypothetical primary care population with and without use of the preventive service. These comparisons may be extended to consider only people of specified age or risk groups or other aspects of implementation. Thus, outcomes tables allow the USPSTF to examine directly how the preventive services affects benefits for various groups.

When evidence on harms is available, the topic teams assess its quality in a manner like that for benefits and include adverse events in the outcomes tables. When few harms data are available, the USPSTF does not assume that harms are small or nonexistent. It recognizes a responsibility to consider which harms are likely and judge their potential frequency and the severity that might ensue from implementing the service. It uses whatever evidence exists to construct a general confidence interval on the 4-point scale (e.g., substantial, moderate, small, and zero/negative).

Value judgments are involved in using the information in an outcomes table to rate either benefits or harms on the USPSTF´s 4-point scale. Value judgments are also needed to weigh benefits against harms to arrive a rating of net benefit.

In making its determinations of net benefit, the USPSTF strives to consider what it believes are the general values of most people. It does this with greater confidence for certain outcomes (e.g., death) about which there is little disagreement about undesirability, but it recognizes that the degree of risk people are willing to accept to avert other outcomes (e.g., cataracts) can vary considerably. When the USPSTF perceives that preferences among individuals vary greatly, and that these variations are sufficient to make trade-off of benefits and harms a 'close-call', then it will often assign a C recommendation (see the "Recommendation Rating Scheme" field). This recommendation indicates the decision is likely to be sensitive to individual patient preferences.

The USPSTF uses its assessment of the evidence and magnitude of net benefit to make recommendations. The general principles the USPSTF follows in making recommendations are outlined in Table 5 of the companion document cited below. The USPSTF liaisons on the topic team compose the first drafts of the recommendations and rationale statements, which the full panel then reviews and edits. Recommendations are based on formal voting procedures that include explicit rules for determining the views of the majority.

From: Harris RP, Helfand M, Woolf SH, Lohr KN, Mulrow, CD, Teutsch SM, Atkins D. Current methods of the U.S. Preventive Services Task Force: a review of the process. Methods Work Group, Third U.S. Preventive Services Task Force. Am J Prev Med 2001 Apr;20(3S):21-35.

RATING SCHEME FOR THE STRENGTH OF THE RECOMMENDATIONS

The Task Force grades its recommendations according to one of 5 classifications (A, B, C, D, I) reflecting the strength of evidence and magnitude of net benefit (benefits minus harms):

A

The USPSTF strongly recommends that clinicians provide [the service] to eligible patients. The USPSTF found good evidence that [the service] improves important health outcomes and concludes that benefits substantially outweigh harms.

B

The USPSTF recommends that clinicians provide [the service] to eligible patients. The USPSTF found at least fair evidence that [the service] improves important health outcomes and concludes that benefits outweigh harms.

C

The USPSTF makes no recommendation for or against routine provision of [the service]. The USPSTF found at least fair evidence that [the service] can improve health outcomes but concludes that the balance of benefits and harms is too close to justify a general recommendation.

D

The USPSTF recommends against routinely providing [the service] to asymptomatic patients. The USPSTF found at least fair evidence that [the service] is ineffective or that harms outweigh benefits.

I

The USPSTF concludes that the evidence is insufficient to recommend for or against routinely providing [the service]. Evidence that [the service] is effective is lacking, of poor quality, or conflicting and the balance of benefits and harms cannot be determined.

COST ANALYSIS

Cost of Obesity and Overweight

Financially, obesity incurs substantial cost. Recent analyses estimate that direct costs of obesity are 5.7% of total U.S. health expenditures and 2.4% of the total health care budget of Canada. A U.S.-based study looking at the impact of obesity on the cost of expected lifetime medical care on 5 diseases (hypertension, hypercholesterolemia, diabetes mellitus, coronary heart disease, and stroke) found that costs increased by 20% with mild obesity, by 50% with moderate obesity, and nearly 200% with severe obesity.

Costs and Cost-Effectiveness of Screening and Treatment

A systematic review of intervention costs was beyond the scope of the review.

METHOD OF GUIDELINE VALIDATION

Comparison with Guidelines from Other Groups
External Peer Review
Internal Peer Review

DESCRIPTION OF METHOD OF GUIDELINE VALIDATION

Peer Review. Before the U.S. Preventive Services Task Force (USPSTF) makes its final determinations about recommendations on a given preventive service, the Evidence-based Practice Center and the Agency for Healthcare Research and Quality send a draft systematic evidence review to 4 to 6 external experts and to federal agencies and professional and disease-based health organizations with interests in the topic. They ask the experts to examine the review critically for accuracy and completeness and to respond to a series of specific questions about the document. After assembling these external review comments and documenting the proposed response to key comments, the topic team presents this information to the Task Force in memo form. In this way, the Task Force can consider these external comments and a final version of the systematic review before it votes on its recommendations about the service. Draft recommendations are then circulated for comment from reviewers representing professional societies, voluntary organizations and Federal agencies. These comments are discussed before the whole USPSTF before final recommendations are confirmed.

Recommendation of Others. Recommendations for screening for obesity from the following groups were discussed: the Canadian Task Force on Preventive Health Care; the American Academy of Family Physicians; the American College of Obstetricians and Gynecologists; the National Institutes of Health; the American College of Preventive Medicine; and the American Diabetes Association.

RECOMMENDATIONS

MAJOR RECOMMENDATIONS

The U.S. Preventive Services Task Force (USPSTF) grades its recommendations (A, B, C, D, or I) and the quality of the overall evidence for a service (good, fair, poor). The definitions of these grades can be found at the end of the "Major Recommendations" field.

The USPSTF recommends that clinicians screen all adult patients for obesity and offer intensive counseling and behavioral interventions to promote sustained weight loss for obese adults. B recommendation

The USPSTF found good evidence that body mass index (BMI), calculated as weight in kilograms divided by height in meters squared, is reliable and valid for identifying adults at increased risk for mortality and morbidity due to overweight and obesity. There is fair to good evidence that high-intensity counseling--about diet, exercise, or both--together with behavioral interventions aimed at skill development, motivation, and support strategies produces modest, sustained weight loss (typically 3-5 kg for 1 year or more) in adults who are obese (as defined by BMI $\geq$30 kg/m ^{2}). Although the USPSTF did not find direct evidence

that behavioral interventions lower mortality or morbidity from obesity, the USPSTF concluded that changes in intermediate outcomes, such as improved glucose metabolism, lipid levels, and blood pressure, from modest weight loss provide indirect evidence of health benefits. No evidence was found that addressed the harms of counseling and behavioral interventions. The USPSTF concluded that the benefits of screening and behavioral interventions outweigh potential harms.

The USPSTF concludes that the evidence is insufficient to recommend for or against the use of moderate- or low-intensity counseling together with behavioral interventions to promote sustained weight loss in obese adults. I recommendation

The USPSTF found limited evidence to determine whether moderate- or low-intensity counseling with behavioral interventions produces sustained weight loss in obese (as defined by BMI $\geq$30 kg/m^2) adults. The relevant studies were of fair to good quality but showed mixed results. In addition, studies were limited by small sample sizes, high drop-out rates, potential for selection bias, and reporting the average weight change instead of the frequency of response to the intervention. As a result, the USPSTF could not determine the balance of benefits and potential harms of these types of interventions.

The USPSTF concludes that the evidence is insufficient to recommend for or against the use of counseling of any intensity and behavioral interventions to promote sustained weight loss in overweight adults. I recommendation.

The USPSTF found limited data that addressed the efficacy of counseling-based interventions in overweight adults (as defined by BMI from 25-29.9 kg/m^2). As a result, the USPSTF could not determine the balance of benefits and potential harms of counseling to promote sustained weight loss in overweight adults.

Clinical Considerations

- A number of techniques, such as bioelectrical impedance, dual-energy X-ray absorptiometry, and total body water can measure body fat, but it is impractical to use them routinely. BMI, which is simply weight adjusted for height, is a more practical and widely-used method to screen for obesity. Increased BMI is associated with an increase in adverse health effects. Central adiposity increases the risk for cardiovascular and other diseases independent of obesity. Clinicians may use the waist circumference as a measure of central adiposity. Men with waist circumferences >102 cm (>40 inches) and women with waist circumferences >88 cm (>35 inches) are at increased risk for cardiovascular disease. The waist circumference thresholds are not reliable for patients with a BMI >35.
- Expert committees have issued guidelines defining overweight and obesity based on BMI. Persons with a BMI between 25 and 29.9 are overweight and those with a BMI of $\geq$30 are obese. There are 3 classes of obesity: class I (BMI 30-34.9), class II (BMI 35-39.9), and class III (BMI 40 and above). BMI is calculated either as weight in pounds divided by height in inches squared multiplied by 703, or as weight in kilograms divided by height in meters squared. The National Institutes of Health (NIH) provides a BMI calculator at

www.nhlbisupport.com/bmi and a table at www.nhlbi.nih.gov/guidelines/obesity/bmi_tbl.htm.

- The most effective interventions combine nutrition education and diet and exercise counseling with behavioral strategies to help patients acquire the skills and supports needed to change eating patterns and to become physically active. The 5 A framework (Assess, Advise, Agree, Assist, and Arrange) has been used in behavioral counseling interventions such as smoking cessation and may be a useful tool to help clinicians guide interventions for weight loss (see the section, "Effectiveness of Interventions on Weight Loss," below). Initial interventions paired with maintenance interventions help ensure that weight loss will be sustained over time.
- It is advisable to refer obese patients to programs that offer intensive counseling and behavioral interventions for optimal weight loss. The USPSTF defined intensity of counseling by the frequency of the intervention. A high-intensity intervention is more than 1 person-to-person (individual or group) session per month for at least the first 3 months of the intervention. A medium-intensity intervention is a monthly intervention, and anything less frequent is a low-intensity intervention. There are limited data on the best place for these interventions to occur and on the composition of the multidisciplinary team that should deliver high-intensity interventions.
- The USPSTF concluded that the evidence on the effectiveness of interventions with obese people may not be generalizable to adults who are overweight but not obese. The evidence for the effectiveness of interventions for weight loss among overweight adults, compared with obese adults, is limited.
- Orlistat and sibutramine, approved for weight loss by the Food and Drug Administration, can produce modest weight loss (2.6-4.8 kg) that can be sustained for at least 2 years if the medication is continued. The adverse effects of orlistat include fecal urgency, oily spotting, and flatulence; the adverse effects of sibutramine include an increase in blood pressure and heart rate. There are no data on the long-term (longer than 2 years) benefits or adverse effects of these drugs. Experts recommend that pharmacological treatment of obesity be used only as part of a program that also includes lifestyle modification interventions, such as intensive diet and/or exercise counseling and behavioral interventions.
- There is fair to good evidence to suggest that surgical interventions such as gastric bypass, vertical banded gastroplasty, and adjustable gastric banding can produce substantial weight loss (28 to >40 kg) in patients with class III obesity. Clinical guidelines developed by the National Heart, Lung, and Blood Institute (NHLBI) Expert Panel on the identification, evaluation, and treatment of overweight and obesity in adults recommend that these procedures be reserved for patients with class III obesity and for patients with class II obesity who have at least 1 other obesity-related illness. The postoperative mortality rate for these procedures is 0.2%. Other complications include wound infection, re-operation, vitamin deficiency, diarrhea, and hemorrhage. Re-operation may be necessary in up to 25% of patients. Patients should receive a psychological evaluation prior to undergoing these procedures. The long-term health effects of surgery for obesity are not well characterized.
- The data supporting the effectiveness of interventions to promote weight loss are derived mostly from women, especially white women. The effectiveness of the interventions is less well established in other populations, including the elderly. The USPSTF believes that, although the data are limited, these interventions may be used with obese men, physiologically mature older

adolescents, and diverse populations, taking into account cultural and other individual factors.

Definitions:

Strength of Recommendations

The Task Force grades its recommendations according to one of 5 classifications (A, B, C, D, I) reflecting the strength of evidence and magnitude of net benefit (benefits minus harms):

A

The USPSTF strongly recommends that clinicians routinely provide [the service] to eligible patients. The USPSTF found good evidence that [the service] improves important health outcomes and concludes that benefits substantially outweigh harms.

B

The USPSTF recommends that clinicians routinely provide [the service] to eligible patients. The USPSTF found at least fair evidence that [the service] improves important health outcomes and concludes that benefits outweigh harms.

C

The USPSTF makes no recommendation for or against routine provision of [the service]. The USPSTF found at least fair evidence that [the service] can improve health outcomes but concludes that the balance of benefits and harms is too close to justify a general recommendation.

D

The USPSTF recommends against routinely providing [the service] to asymptomatic patients. The USPSTF found at least fair evidence that [the service] is ineffective or that harms outweigh benefits.

I

The USPSTF concludes that the evidence is insufficient to recommend for or against routinely providing [the service]. Evidence that [the service] is effective is lacking, of poor quality, or conflicting and the balance of benefits and harms cannot be determined.

Strength of Evidence

The USPSTF grades the quality of the overall evidence for a service on a 3-point scale (good, fair, poor):

Good

Evidence includes consistent results from well-designed, well-conducted studies in representative populations that directly assess effects on health outcomes.

Fair

Evidence is sufficient to determine effects on health outcomes, but the strength of the evidence is limited by the number, quality, or consistency of the individual studies, generalizability to routine practice, or indirect nature of the evidence on health outcomes.

Poor

Evidence is insufficient to assess the effects on health outcomes because of limited number or power of studies, important flaws in their design or conduct, gaps in the chain of evidence, or lack of information on important health outcomes.

CLINICAL ALGORITHM(S)

None provided

EVIDENCE SUPPORTING THE RECOMMENDATIONS

TYPE OF EVIDENCE SUPPORTING THE RECOMMENDATIONS

The type of evidence supporting the recommendations is identified in the "Major Recommendations" field.

BENEFITS/HARMS OF IMPLEMENTING THE GUIDELINE RECOMMENDATIONS

POTENTIAL BENEFITS

Effectiveness of Detection and Intervention

Although the diagnosis of obesity is at times obvious, clinicians often do not address the issue with their obese patients. In a large national study of adults with a body mass index (BMI) of 30 or greater, for example, only 42% reported that their health care professional advised them to lose weight. The U.S. Preventive Services Task Force (USPSTF) found no randomized controlled trials (RCTs) evaluating the efficacy of obesity screening programs in improving the clinical outcomes of mortality, morbidity, mental health, or functioning. Thus, the Task Force examined indirect evidence regarding the component questions of the effectiveness of interventions to lose weight, and the effects of weight loss on intermediate and clinical outcomes.

The Effectiveness of Interventions on Weight Loss

The USPSTF examined 3 categories of weight loss counseling and behavioral interventions using lifestyle change, pharmacotherapy, and surgery. The USPSTF examined published systematic reviews as well as the primary research.

Counseling interventions include a variety of approaches aimed at promoting change in diet and/or physical activity. Behavioral interventions include strategies that assist patients to acquire skills, improve motivation and develop supports. The 5 A framework (Assess, Advise, Agree, Assist, and Arrange) has been used in behavioral counseling interventions and may be a useful tool to help clinicians guide interventions for weight loss.

Counseling and behavioral interventions showed small to moderate degrees of weight loss sustained over at least 1 year. Counseling interventions led to weight changes in the range of +1 kg to -6 kg or from -4% to -8% of body weight. Although several trials were of good quality, most were judged only fair, with limitations such as small sample size, potential selection bias (trials often enrolled volunteers), and high drop-out rates. Studies tended to report mean group weight change and not frequency of response to the interventions. Trials of higher-intensity interventions (defined by the USPSTF as person-to-person meetings more than once a month for at least the first 3 months), and combinations of interventions appeared to promote greater weight loss than trials of lower-intensity interventions. Among 11 RCTs evaluating high-intensity interventions, only 3 explicitly stated the location of the interventions: 2 were conducted in large research clinics and 1 was conducted in a primary physician's office. The 11 RCTs used a variety of health professionals to deliver the interventions, including physicians, psychologists, dieticians, behavioral therapists, exercise instructors, and multidisciplinary teams. Four RCTs using high-intensity interventions achieved significant reductions in weight or prevention of weight gain in the treatment groups (average loss: 2.7-5.5 kg at 12 months to more than 2 years of follow-up). Trials with follow-up beyond 1 year tended to show a loss of effect; but several studies showed a modest weight loss maintained at 24 to 36 months. Weight loss methods may need to be paired with longer-term maintenance interventions for sustained improvement.

The USPSTF found the evidence supporting pharmacotherapy of mostly fair quality. Data for sibutramine and orlistat suggest that these drugs have modest but potentially sustained effects. Although average weight loss was consistently modest (weight reduction of 3-5 kg), the percentage of patients achieving clinically significant weight loss (5%-10% of body weight) was sometimes substantial. Weight maintenance trials suggested that prolonged pharmacotherapy confers some benefit but that its discontinuation may lead to rapid weight regain. There are limited data on combined behavioral and pharmacological interventions. One fair-quality trial showed that a combination of intensive behavioral therapy and sibutramine led to greater weight loss (mean of 7.3 kg over 1 year) compared with sibutramine alone, and that a combination of intensive behavioral therapy and diet control with sibutramine led to even greater weight loss (mean of 12.8 kg over 1 year) compared with sibutramine alone.

Obesity surgery (e.g., gastric banding, vertical banded gastroplasty, and gastric bypass) has been performed for only a select group of patients; the NHLBI clinical guide for identification, evaluation, and treatment of overweight and obesity in adults recommends surgical intervention only for those people with a BMI >40 or a BMI of 35 to 40 with at least 1 obesity-related comorbidity. National data indicate that 5% to 6% of the general population has a BMI in this range. Surgical data are typically limited by the lack of placebo-controlled RCTs; the internal validity of the controlled trials is of only "fair" quality. Nonetheless, the degree of

weight reduction obtained with surgical intervention is consistently dramatic (typically 20 kg or more). Based on a large literature of controlled and uncontrolled cohort studies, the weight loss may be prolonged and can be achieved in patients who have multiple comorbidities.

The Effectiveness of Weight Loss on Intermediate Outcomes

Weight reduction of 5% to 7% body weight is associated with lower incidence of diabetes, reduced blood pressure, and improved dyslipidemia. Greater weight loss has been linked with more dramatic improvements in glycemic control and lipids in limited surgical (non-RCT) outcomes data. Surgical cohort studies suggest that large amounts of weight loss may be linked with dramatic improvements in glucose metabolism. Surgically treated patients are more likely to have resolution of diabetes, hypertension, and certain dyslipidemias than patients who do not undergo surgery.

The Effectiveness of Weight Loss on Clinical Outcomes

The USPSTF searched for evidence that weight loss can affect mortality, morbidity, mental health, and daily functioning, but found the evidence severely limited. There are no strong data to demonstrate that weight loss reduces mortality. Moderate intentional weight loss (5%-10% of initial body weight) has been shown to reduce the severity of comorbidities associated with obesity, and limited observational data suggest that intentional weight loss in the obese can lead to reduced mortality. Two recent trials provide strong evidence that behaviorally mediated weight loss can prevent diabetes. One trial evaluating 2 types of behavioral therapy showed borderline improved self-esteem in both treatment groups. The USPSTF found mixed evidence of improvements of secondary health outcomes among the short-term pharmacotherapy trials.

Subgroups Most Likely to Benefit

Obesity is more common in women and overweight is more common in men; obesity is especially common in African Americans, Native Americans, Native Hawaiians, and some Hispanic populations.

POTENTIAL HARMS

Potential Harms of Screening and Treatment

The U.S. Preventive Services Task Force did not find studies evaluating the harms of screening, counseling, or behavioral interventions. Nonetheless, a potential risk does exist, particularly as the stigma of obesity is well established. Possible labeling effects of diagnosis may occur. The National Task Force on the Prevention and Treatment of Obesity found that dieting does not lead to problems in psychological functioning or eating disorders in overweight or obese adults. There are limited and conflicting data on the potential harms of weight cycling (cycles of weight loss followed by weight regain). There may be harms related to pharmacological and surgical interventions. Common adverse effects occur more frequently with sibutramine (especially an increase in blood pressure and heart rate), but no serious adverse events were reported. Orlistat causes

gastrointestinal fecal urgency, flatulence, and oily spotting in 22% to 27% of people taking the drug. The long-term safety (>2 years) of sibutramine and orlistat is unknown. Surgical procedures are followed by procedure-specific complications (e.g., wound infection, staple failure, and leakage), but are rarely fatal (mortality was less than 1% of patients in pooled samples). The jejuno-ileal bypass is no longer recommended because of excessive malabsorption. Re-operation is necessary within 5 years in up to 25% of patients, and patients require long-term follow-up and multivitamin supplementation.

QUALIFYING STATEMENTS

QUALIFYING STATEMENTS

The U.S. Preventive Services Task Force recommendations are independent of the U.S. government. They do not represent the views of the Agency for Healthcare Research and Quality (AHRQ), the U.S. Department of Health and Human Services, or the U.S. Public Health Service.

IMPLEMENTATION OF THE GUIDELINE

DESCRIPTION OF IMPLEMENTATION STRATEGY

The experiences of the first and second U.S. Preventive Services Task Force (USPSTF), as well as that of other evidence-based guideline efforts, have highlighted the importance of identifying effective ways to implement clinical recommendations. Practice guidelines are relatively weak tools for changing clinical practice when used in isolation. To effect change, guidelines must be coupled with strategies to improve their acceptance and feasibility. Such strategies include enlisting the support of local opinion leaders, using reminder systems for clinicians and patients, adopting standing orders, and audit and feedback of information to clinicians about their compliance with recommended practice.

In the case of preventive services guidelines, implementation needs to go beyond traditional dissemination and promotion efforts to recognize the added patient and clinician barriers that affect preventive care. These include clinicians' ambivalence about whether preventive medicine is part of their job, the psychological and practical challenges that patients face in changing behaviors, lack of access to health care or of insurance coverage for preventive services for some patients, competing pressures within the context of shorter office visits, and the lack of organized systems in most practices to ensure the delivery of recommended preventive care.

Neither the resources nor the composition of the U.S. Preventive Services Task Force equip it to address these numerous implementation challenges, but a number of related efforts seek to increase the impact of future U.S. Preventive Services Task Force reports. The U.S. Preventive Services Task Force convened representatives from the various audiences for the Guide "Put Prevention Into Practice. A Step-by-Step Guide to Delivering Clinical Preventive Services: A Systems Approach"--clinicians, consumers and policy makers from health plans, national organizations and Congressional staff--about how to modify the content

and format of its products to address their needs. With funding from the Robert Wood Johnson Foundation, the U.S. Preventive Services Task Force and Community Guide effort have conducted an audience analysis to further explore implementation needs. The Put Prevention into Practice initiative at the Agency for Healthcare Research and Quality (AHRQ) has developed office tools such as patient booklets, posters, and handheld patient mini-records, and a new implementation guide for state health departments.

Dissemination strategies have changed dramatically in this age of electronic information. While recognizing the continuing value of journals and other print formats for dissemination, the Agency for Healthcare Research and Quality will make all U.S. Preventive Services Task Force (USPSTF) products available through its Web site. The combination of electronic access and extensive material in the public domain should make it easier for a broad audience of users to access U.S. Preventive Services Task Force materials and adapt them for their local needs. Online access to U.S. Preventive Services Task Force products also opens up new possibilities for the appearance of the third edition of the Guide to Clinical Preventive Services. Freed from having to serve as primary repository for all of U.S. Preventive Services Task Force work, the next Guide may be much slimmer than the almost 1000 pages of the second edition.

To be successful, approaches for implementing prevention have to be tailored to the local level and deal with the specific barriers at a given site, typically requiring the redesign of systems of care. Such a systems approach to prevention has had notable success in established staff-model health maintenance organizations, by addressing organization of care, emphasizing a philosophy of prevention, and altering the training and incentives for clinicians. Staff-model plans also benefit from integrated information systems that can track the use of needed services and generate automatic reminders aimed at patients and clinicians, some of the most consistently successful interventions. Information systems remain a major challenge for individual clinicians' offices, however, as well as for looser affiliations of practices in network-model managed care and independent practice associations, where data on patient visits, referrals and test results are not always centralized.

RELATED QUALITY TOOLS

- Pocket Guide to Good Health for Adults

- A Step-by-Step Guide to Delivering Clinical Preventive Services: A Systems Approach

- Screening for Obesity in Adults. What's New from the USPSTF.

INSTITUTE OF MEDICINE (IOM) NATIONAL HEALTHCARE QUALITY REPORT CATEGORIES

IOM CARE NEED

Staying Healthy

IOM DOMAIN

Effectiveness
Patient-centeredness

IDENTIFYING INFORMATION AND AVAILABILITY

BIBLIOGRAPHIC SOURCE(S)

Screening for obesity in adults: recommendations and rationale. Ann Intern Med 2003 Dec 2;139(11):930-2. [5 references] PubMed

ADAPTATION

Not applicable: The guideline was not adapted from another source.

DATE RELEASED

1996 (revised 2003 Dec 2)

GUIDELINE DEVELOPER(S)

United States Preventive Services Task Force - Independent Expert Panel

GUIDELINE DEVELOPER COMMENT

The U.S. Preventive Services Task Force (USPSTF) is a Federally-appointed panel of independent experts. Conclusions of the U.S. Preventive Services Task Force do not necessarily reflect policy of the U.S. Department of Health and Human Services (DHHS) or its agencies.

SOURCE(S) OF FUNDING

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GUIDELINE COMMITTEE

U.S. Preventive Services Task Force (USPSTF)

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*Members of the Task Force at the time this recommendation was finalized. For a list of current Task Force members, go to www.ahrq.gov/clinic/uspstfab.htm.

FINANCIAL DISCLOSURES/CONFLICTS OF INTEREST

The U.S. Preventive Services Task Force has an explicit policy concerning conflict of interest. All members and evidence-based practice center (EPC) staff disclose at each meeting if they have an important financial conflict for each topic being discussed. Task Force members and EPC staff with conflicts can participate in discussions about evidence, but members abstain from voting on recommendations about the topic in question.

From: Harris RP, Helfand M, Woolf SH, Lohr KN, Mulrow, CD, Teutsch SM, Atkins D. Current methods of the U.S. Preventive Services Task Force: a review of the process. Methods Work Group, Third U.S. Preventive Services Task Force. Am J Prev Med 2001 Apr;20(3S):21-35.

GUIDELINE STATUS

This is the current release of the guideline.

This release updates a previously published guideline: U.S. Preventive Services Task Force. Screening for obesity. In: Guide to clinical preventive services. 2nd ed; Baltimore (MD): Williams & Wilkins; 1996. p. 219-29.

GUIDELINE AVAILABILITY

Electronic copies: Available from the U.S. Preventive Services Task Force (USPSTF) Web site. Also available from the Annals of Internal Medicine Online and the National Library of Medicine's Health Services/Technology Assessment Text (HSTAT) Web site.

Print copies: Available from the Agency for Healthcare Research and Quality (AHRQ) Publications Clearinghouse. For more information, go to http://www.ahrq.gov/news/pubsix.htm or call 1-800-358-9295 (U.S. only).

AVAILABILITY OF COMPANION DOCUMENTS

The following are available:

Evidence Review:

- McTigue K. Screening and interventions for obesity in adults: a summary of the evidence for the U.S. Preventive Services Task Force. Ann Intern Med 2003 Dec 2;139(11):933-949.
- McTigue K, Harris R, Hemphill MB, Bunton AJ, Lux LJ, Sutton S, Lohr KW. Screening and interventions for overweight and obesity in adults. Rockville (MD); Agency for Healthcare Research and Quality; 2003 Dec. (Systematic evidence review; no. 21).

Electronic copies: Available from the U.S. Preventive Services Task Force (USPSTF) Web site.

Background Articles:

- Woolf SH, Atkins D. The evolving role of prevention in health care: contributions of the U.S. Preventive Services Task Force. Am J Prev Med 2001 Apr;20(3S):13-20.
- Harris RP, Helfand M, Woolf SH, Lohr KN, Mulrow, CD, Teutsch SM, Atkins D. Current methods of the U.S. Preventive Services Task Force: a review of the process. Methods Work Group, Third U.S. Preventive Services Task Force. Am J Prev Med 2001 Apr;20(3S):21-35.
- Saha S, Hoerger TJ, Pignone MP, Teutsch SM, Helfand M, Mandelblatt JS. The art and science of incorporating cost effectiveness into evidence-based recommendations for clinical preventive services. Cost Work Group of the Third U.S. Preventive Services Task Force. Am J Prev Med 2001 Apr;20(3S):36-43.

Electronic copies: Available from U.S. Preventive Services Task Force (USPSTF) Web site.

Additional Implementation Tools:

- A step-by-step guide to delivering clinical preventive services: a systems approach. Rockville (MD): Agency for Healthcare Research and Quality (AHRQ), 2001. 189 p. (Pub. No. APPIP01-0001). Electronic copies available from the AHRQ Web site.

Print copies: Available from the Agency for Healthcare Research and Quality Publications Clearinghouse. For more information, go to http://www.ahrq.gov/news/pubsix.htm or call 1-800-358-9295 (U.S. only).

- The Preventive Services Selector, an application for Palm Pilots and other PDA's, is also available from the AHRQ Web site.
- Screening for obesity in adults. What's new from the USPSTF?. Rockville (MD): Agency for Healthcare Research and Quality; 2003 Dec. Electronic copies: Available from USPSTF Web site.
- Pharmacological and surgical treatment of obesity. Agency for Healthcare Research and Quality; 2004 Jul. Electronic copies: Available from USPSTF Web site.

PATIENT RESOURCES

The following is available:

- The Pocket Guide to Good Health for Adults. Rockville (MD): Agency for Healthcare Research and Quality (AHRQ); 2003.

Electronic copies: Available from the U.S. Preventive Services Task Force (USPSTF) Web site. Copies also available in Spanish from the USPSTF Web site.

Print copies: Available from the Agency for Healthcare Research and Quality (AHRQ) Publications Clearinghouse. For more information, go to http://www.ahrq.gov/news/pubsix.htm or call 1-800-358-9295 (U.S. only).

Please note: This patient information is intended to provide health professionals with information to share with their patients to help them better understand their health and their diagnosed disorders. By providing access to this patient information, it is not the intention of NGC to provide specific medical advice for particular patients. Rather we urge patients and their representatives to review this material and then to consult with a licensed health professional for evaluation of treatment options suitable for them as well as for diagnosis and answers to their personal medical questions. This patient information has been derived and prepared from a guideline for health care professionals included on NGC by the authors or publishers of that original guideline. The patient information is not reviewed by NGC to establish whether or not it accurately reflects the original guideline's content.

NGC STATUS

This summary was completed by ECRI on June 30, 1998. The information was verified by the guideline developer on December 1, 1998. This summary was updated by ECRI on November 1, 2003. The updated information was verified by the guideline developer on November 2, 2003.

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